

## 4.12 SOCIOECONOMICS

This section describes potential impacts to socioeconomics from other management actions. Existing conditions concerning socioeconomics are reviewed in Section 3.6 and described in detail in the Socioeconomic Baseline Profile.<sup>1</sup>

### Significance Criteria

Impacts to socioeconomic resources from implementation of alternatives would be considered significant if one or more of the following occurs:

- Substantial gains or losses in population and/or employment.
- Disequilibrium in the housing market such as severe housing shortages or surpluses.
- Activity-related demands on public infrastructure or services triggering the need for expanded capacity (and costs) or resulting in discernible reductions in the level of service provided.
- Activities or operations substantially altering lifestyles or quality-of-life of individuals utilizing or living near lands within the Price Field Office.
- Disproportionately high and adverse environmental or human health impacts to an identified minority or low-income population, which appreciably exceed those to the general population around the project area.

The analysis is based on the following assumptions:

- Economic benefits to the socioeconomic study area would accrue from BLM-influenced activities such as oil and gas development, coal production, livestock grazing, and recreation.
- Employment and income would continue to be a driver of economic and population growth in the study area.
- Housing supply and costs, and community infrastructure and services, may serve as constraints to population growth in the PFO vicinity.
- Tax revenues derived from activities on BLM lands would continue to have fiscal implications for communities within the study area.
- Activities and resources available in and around the PFO would continue to be important to the quality of life of current and future residents.
- An estimate of future oil and gas exploration and development was taken from the Reasonable Foreseeable Development Report (RFD).
- An estimate of coal exploration and development was taken from the RFD.
- The five-year historic average was used as a basis in developing grazing assumptions used under each alternative.

Changes in employment and income in a particular area can lead to other socioeconomic impacts such as changes in population, which can lead to other impacts on housing, infrastructure, government services and quality of life issues. Thus, this analysis first evaluated how BLM management actions could cause changes in employment and income in the study

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<sup>1</sup> U.S. Bureau of Land Management, *Baseline Socioeconomic Profile, Price Field Office Resource Management Plan*, August 2003

area. Changes in employment and income were then used to qualitatively assess other impacts in the socioeconomic study area. The methods used are discussed below.

## Methods of Analysis

The methods used to estimate impacts required a series of inputs and assumptions specific to the PFO and the study area. Current uses of the PFO and how these uses may change under each alternative provided a physical, quantitative measure of inputs necessary for the economic impact analysis (e.g. number of gas wells, AUMs, etc.). Table 4.12-1 summarizes the primary data and sources used to estimate physical inputs for the analysis.

**Table 4.12-1. Primary Inputs for Socioeconomic Analysis**

Use	Primary Data Inputs	Data Source
Oil and Gas Exploration and Development	1) Historical Production, 2) Development Cost Estimates 3) Reasonable Foreseeable Development Scenario	1) UT Geological Survey 2) U.S. Department of Energy – Energy Information Agency (EIA) 3) BLM
Coal Mining	1) Historical Production 2) Average Prices 3) Reasonable Foreseeable Development Scenario	1) BLM 2) State of Utah 3) EIA
Grazing	1) Historical AUMs for Cattle and Sheep within the PFO 2) Historical Cattle and Sheep Prices (1996-2001)	1) BLM 2) UT Agriculture Statistics

These quantitative measures were used in combination with the IMPLAN modeling system to estimate changes in employment and income in the study area. IMPLAN is based on national production coefficients and can be modified to better reflect local production practices where necessary. In this particular case the IMPLAN sectors associated with coal mining, oil and gas operations and grazing were not adjusted since it was felt they were a reasonably accurate representation of the sectors found in the study area. County specific data for Carbon and Emery Counties for 2001 was obtained from the Minnesota IMPLAN Group (MIG, Inc.) and used for this analysis.

Specific assumptions used to analyze to each activity are discussed below.

### Coal Mining

Historically, coal mining has been a very prevalent activity within the PFO and it is expected that this trend will continue in the future. Economic contributions associated with coal mining within the PFO were evaluated as follows.

Annual expected production during the study period was estimated for each of the coal fields within the PFO by first examining potential reserves and annual historical production. Potential coal reserves and historical annual production for each of the relevant coal fields within the PFO (Wasatch Plateau, Book Cliffs and Emery) was obtained from the RFD and the

Utah Energy Office.<sup>2</sup> Adjustments were made to historical production for the Wasatch Plateau to account for the production that occurs within Sevier County which is outside the PFO. In addition, because some of the coal production within the study area occurs on state and private lands, the annual production for the Wasatch Plateau and the Book Cliffs fields was adjusted to consider only the coal production that corresponds to federal mineral ownership.<sup>3</sup> After these adjustments were made, a five-year production average was calculated for the Wasatch Plateau and the Book Cliffs fields and represents the average production for these areas within the PFO. Average expected production for the Emery Field was obtained from the Utah Energy Office due to a lack of historical data on production for this field.<sup>4</sup>

The five-year historical production averages for the Book Cliffs and Wasatch Plateau fields as well as the expected annual production for the Emery field were then used as a basis for expected annual coal production within the PFO during the study period (Table 4.12-2).

**Table 4.12-2. Estimated Average Coal Production for the PFO**

<b>Coal Field</b>	<b>Average Annual Production (1,000 Short Tons)</b>
Wasatch Plateau	11,535
Book Cliffs	3,716
Emery	2,000

The value of coal production within the PFO was then estimated by applying an annual price forecast per short ton to the annual production rates listed in Table 4.12-2. The average forecasted price was obtained from the Energy Information Administration<sup>5</sup> and represents the average minemouth price for the U.S. during the study period. The economic contribution of this activity in terms of jobs and earnings was estimated by running the value of coal production through IMPLAN Sector 20 – Coal Mining for Carbon and Emery counties.

## **Oil and Gas Exploration And Development**

The economic impacts of oil and gas operations were analyzed in two phases:

- Phase I: Exploration and Development
- Phase II: Production

Phase 1 considered how many exploratory and development wells would be drilled under each alternative in the PFO, and what percentage of these wells would be completed. The average number of wells expected to be drilled under each alternative was taken from the RFD. This includes both conventional wells and coal bed methane development. Oil production was not

<sup>2</sup> Utah Energy Office, *Annual Review and Forecast of Utah Coal, Production and Distribution 2002*, November, 2003.

<sup>3</sup> Landownership of coal reserves was obtained from the Utah Energy Statistical Abstract, prepared by the Utah Energy Office, Department of Natural Resources, December, 2003.

<sup>4</sup> The Emery Deep Mine was reopened in 2002 and has had minimal production for the last two years. However, the mine is expected to produce approximately 2 million tons per year, which is similar to other major Utah mines.

<sup>5</sup> Energy Information Administration, AEO2004 National Energy Modeling System run aeo2004.d101703e.

evaluated given the small amount of production expected to occur within the PFO. Drilling costs and completion rates used for this analysis are summarized in Table 4.13.3.

A previous study by the State of Utah<sup>6</sup> concluded that Carbon and Emery counties have a very small oil and gas industry. It was thus assumed for this analysis that most of the drilling operators would originate from areas outside the study area. This is important because future investment in oil and gas drilling will have less of an economic impact on the area because most of the direct expenditures will not be recirculated back into the local Carbon-Emery economy. However, there are some businesses that will support drilling activities indirectly that are located in the study area. Based on the previous study of impacts of gas drilling in Carbon and Emery counties, an assumption was made that forty percent of the direct expenditures for new wells would occur locally. These direct, local expenditures were then run through IMPLAN Sector 28 – Support for Oil and Gas Activities, to estimate employment and income impacts of this activity. The direct expenditures associated with drilling operations for the study area used for this analysis are summarized in Table 4.12.3.

The impacts associated with additional gas production were estimated under Phase II. Here, the annual direct expenditures needed to operate each completed gas well, as summarized in Table 4.12.3 were used to estimate employment and income impacts. The economic contribution of this activity was estimated by running the annual direct expenditures for well operations through IMPLAN Sector 19 – Oil and Gas Extraction for Carbon and Emery counties.

**Table 4.12.3. Economic Assumptions for Gas Development**

<b>Drilling and Completion Costs (2001\$)<sup>a</sup></b>	
Coal Bed Methane Wells	\$399,011
Conventional Wells	\$961,241
Completion Rates <sup>b</sup>	
Coal Bed Methane Wells	100%
Conventional Wells	60%
Annual Operating Expenses (2001\$) <sup>c</sup>	
Coal Bed Methane Wells	\$33,467
Conventional Wells	\$8,032

<sup>a</sup> Source: State of Utah and BLM.

<sup>b</sup> Source: BLM.

<sup>c</sup> Source: Cawley, Gillespie & Associates, Inc.

## Grazing

Grazing activities were analyzed under each alternative as follows. First, historical grazing use within the PFO was obtained from BLM records. The values of grazing animal unit months (AUMs) for cattle and sheep were estimated using a modified version of the analysis presented in the Baseline Socioeconomic Profile. The economic analysis used the 5-year average value of AUMs, or \$37.07/AUM for cattle and \$21.49 for sheep in inflation-adjusted dollars. The

<sup>6</sup> State of Utah Natural Resources, Office of Energy and Resource Planning, *The Economic and Fiscal Impacts of Coalbed Gas Drilling in Central Utah*, December, 1995.

economic contribution of this activity in terms of jobs and income was estimated by running the value of grazing activities through IMPLAN Sector 11 – Cattle Ranching and Farming for Carbon and Emery counties.

## **Recreation**

Recreational activity has important economic value both in terms of satisfaction provided to local residents and the economic activity generated for the regional economy. In terms of economic activity, recreation generates additional spending in the local economy that supports jobs and income. Estimates of recreational use within the Price Field Office indicate that there may be several hundred thousand Recreational Visitors Days spent in this area. As visitors come to this area to recreate they spend money on goods and services to support their activities such as lodging, eating and drinking, gasoline and other items. These expenditures can be an important economic stimulus to the local area. Thus, outdoor recreation in general is important to the region both in terms of satisfaction to residents and economic stimulus for the regional economy.

Quantification of the economic stimulus associated with recreation in the PFO is not possible at this time due to lack of verifiable data on recreational use. However, a qualitative assessment of socioeconomic issues related to recreation use is provided in this section.

## **Environmental Justice**

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires identifying and addressing disproportionately high and adverse human health and environmental impacts of Federal programs, policies and activities on minority or low-income populations. In order to evaluate potential environmental justice impacts, the following Federal agency guidance documents were reviewed:

- EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” February 11, 1994, Federal Register at 7630.
- U.S. Environmental Protection Agency, “Interim Final Guidance for Incorporating Environmental Justice Concerns in EPA’s Compliance Analysis, Office of Federal Activities,” September 30, 1997.
- Council on Environmental Quality, “Environmental Justice: Guidance Under the National Environmental Policy Act,” Executive Office of the President, December 1997.

The following five-step method was used to evaluate potential environmental justice impacts associated with land management actions proposed by the BLM.

- Step 1 Identify potential minority or low-income populations within the study area.
- Step 2 Identify a broad range of potential environmental and human health effects that could affect minority or low-income populations including safety, traffic, air quality, noise, cultural resources, hazardous waste sites and hazardous materials transport, natural resources, land use and socioeconomics.
- Step 3 Assess whether the potential impacts on minority and low-income populations would be high and adverse.

- Step 4 Conduct extended outreach to minority and low-income populations that would experience potential high and adverse effects.
- Step 5 Evaluate mitigation measures that would be used to minimize adverse impacts to minority and low-income populations.

Relevant Census data for counties within the study area (Carbon and Emery) as well as for Utah was collected for this analysis. This includes:

- Total population
- Percent of population of minority status (e.g. Black or African American, Hispanic or Latino, Asian American, American Indian or Alaskan Native, Native Hawaiian and other Pacific Islander)
- Percent of population of low-income status using annual statistical thresholds from the Bureau of the Census Current Population Reports
- Percent of population of minority status for the entire state of Utah
- Percent of population of low-income status in the entire state of Utah using annual statistical thresholds from the Bureau of the Census Current Population Reports

The data listed above were then used to determine whether the populations residing within the counties in the study area constitute an “environmental justice population” which meets any of the following criteria:

- At least one-half of the population is of minority status
- At least one-half of the population is of low-income status
- The percentage of population of minority status is at least 10 percentage points higher than for the entire State of Utah
- The percentage of population of low-income status is at least 10 percentage points higher than for the entire State of Utah

#### **4.12.1 No Action: Continuation of Existing Management**

##### **Impacts to Regional Employment**

Activities within the PFO will continue to support a number of jobs within the planning area. Most of the employment would be focused on continued coal mining, and oil and gas operations. However, recreation activities and grazing operations would also generate employment within the study area.

##### **Coal Mining**

A major source of jobs in Emery and Carbon counties is through coal mining activities. This includes several coal mines within the PFO. For instance, in 2003 coal mining was estimated to support 1,452 employees throughout Utah, with a large percentage of these jobs located in either Emery and Carbon counties which generated 70 percent of total coal production for Utah.<sup>7</sup> It is expected that coal production within the PFO would exceed 17 million short tons per year during the study period and is estimated to support on average 950 part-time and full-

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<sup>7</sup> Utah Energy Office, Department of Natural Resources, *Annual Review and Forecast of Utah Coal, Production and Distribution*, 2002, November, 2003.

time direct jobs. Additional economic activity generated by coal mining within the PFO would support an additional 1,050 jobs on average per year in Carbon and Emery counties.

### **Oil and Gas Activities**

Under the No Action Alternative, it is expected that an additional \$49 million will be spent annually to drill and complete coal bed methane and conventional gas wells within the PFO. Of this amount, approximately \$19 million is expected to be spent locally. This additional economic activity is estimated to support as many as 168 part-time and full-time jobs per year within the study area. These jobs would support the drilling of approximately 77 additional wells per year as estimated in the mineral RFD. It is anticipated that the increased production within the PFO will support an additional nine jobs per year. Employment impacts include not only the direct jobs needed to support oil and gas drilling and production but additional economic activity generated throughout Carbon and Emery counties.

### **Grazing**

Grazing use will continue to provide jobs in the planning area under the No Action Alternative. Employment supported by grazing activities within the PFO was estimated to be 77 part-time and full-time jobs per year. This employment estimate was based on the average use in the PFO of 43,601 AUMs for cattle and buffalo and 363 AUMs for sheep and cattle.

### **Recreation**

Under the No Action Alternative, impacts to recreation could occur from the reasonable foreseeable development of minerals and energy. The expected level of mineral development in areas of moderate recreation demand could create user conflicts and potentially displace recreationalists. Also, existing management prescriptions do not adequately address the type and intensity of recreational uses that would continue to occur in the San Rafael Swell and Nine Mile Canyon areas.

Factors outside the PFO are expected to put increasing pressures for recreational activities within the PFO under the No Action Alternative. For instance, increasing populations along the Wasatch front and the western slope of Colorado are expected to result in increasing demand for recreational activities in the PFO. In addition, increases in nontraditional uses, such as off highway vehicle (OHV) use, are already being reported.<sup>8</sup> OHV users have indicated that a typical outing included more than one activity, with camping, hiking, hunting, and fishing the most frequently cited. The most popular OHV destinations in Utah are the southeastern and central regions of the state. This helps to explain why both Emery and Carbon counties are experiencing increases in OHV use and dispersed camping. OHV use now accounts for 80 percent of Carbon County's recreational use on public lands.<sup>9</sup> State trends also show OHV use is increasing. In addition, both Emery and Carbon counties are exploring tourism (i.e. river recreation) as an emerging sector.<sup>10</sup>

Although no additional recreation sites will be developed and management prescriptions do not adequately address the increasing recreational demands under the No Action Alternative the large open area would remain accessible to recreational uses. Recreating in the open area could

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<sup>8</sup> Draft Social Economic Assessment, 2003.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

accommodate an increase in recreational use. The increase in recreational visitors from increased OHV use and the multiple activities associated with it along with river recreation provides direct benefits to the study area with increased spending on goods and services. Through a multiplier effect this source of money is dispersed through the local area and can be an important economic stimulus. Thus, it is expected that increases in recreational activities would cause an increase in employment and income in Emery and Carbon counties mainly in the service industry, though these increases are not expected to be significant.

However, without the development of recreational facilities in high uses zones, the quality of recreation may diminish. Nor would the socioeconomic gains in employment and income be maximized, as the benefits from new facilities would not be obtainable. New facilities would allow potential increases in employment and income as well as minimize overcrowding.

### **Impacts to Regional Income**

Activities within the PFO also provide an important source of income for residents within the study area. This includes coal mining, oil and gas development, grazing and recreation. The likely biggest contributor is through continued coal mining and oil and gas development. For instance, coal mining provided as much as 90 percent of total mining earnings during 2000 for Carbon and Emery counties and was estimated to be over \$110 million. In addition, future coal production within the PFO under the No Action Alternative is estimated to provide on average \$80 million in direct earnings per year during the study period. Additional economic activity generated by coal mining within the PFO is estimated to generate an additional \$29 million in earnings in the regional economy.

Anticipated oil and gas activity within the PFO is also expected to generate income in the study area. Annual estimates indicated that over \$9.6 million in earnings could be generated per year with oil and gas activities in the PFO under the No Action Alternative. Grazing will also continue to generate earnings in the area and is estimated to be over \$186,000 per year under the No Action Alternative.

### **Impacts to Population**

Any population change that could be associated with implementation of alternatives under consideration in the EIS would likely be linked to employment changes. Activities within the PFO will continue to support a notable number of jobs in the study area. Because these activities are expected to continue under the No Action Alternative, it is not anticipated that continuing current management actions will significantly affect population trends.

### **Impacts to Community Services**

Activities within the PFO could cause impacts to local government services in various ways. For instance, changes in demand for government services could vary with changes in population tied to the PFO and could cause undue strain on infrastructure (e.g. roads, utilities, schools, etc). As discussed above, notable population changes are not expected under this alternative. Therefore, identifiable changes in demand for government services are not expected due to changes in population.

Management of the PFO could also cause impacts to services through changes in tax receipts. Development activities are expected to continue to generate notable tax revenues to both state



and local government entities throughout the planning period which should have a positive impact on local government services depending on the actual tax sources that are affected.

Management actions could also affect local government services directly. For instance, increased demand for recreation activities could cause some impacts to local government services associated with safety, emergency services and police protection. Increased visitor use, as expected under this alternative, is likely to increase the demand for services provided by local government entities. While local search and rescue operations utilize volunteers, there will be a growing need for training, equipment and resources. In addition, these operations must be supported by the Sheriff's Office in each county.

Increased government services may also be needed to support other activities such as increased oil and gas development. This includes emergency and safety control as well as road maintenance and traffic control. However, increased oil and gas development is also expected to increase mineral tax revenues that could be used to offset these impacts to government services.

### **Social Impacts**

Along with the fish, wildlife, vegetation, and the physical environment, people are an integral part of ecosystems. Lifestyles, attitudes, beliefs, values, social structure, culture, and population characteristics affect, and are affected by, management actions such as those made by the BLM within the PFO. Additionally, PFO lands and BLM management of these lands have emotional meanings to many people. Under this alternative, existing conditions and trends would generally remain the same. The management of the PFO would not change in substantive ways. While the management alternatives support different philosophies and priorities, and the differences among alternatives may be identifiable on a localized basis, the social structure and lifestyle conditions and trends within the PFO would *generally* remain the same as current conditions.

### **Environmental Justice**

Based on the results of the socioeconomic and environmental impact analysis conducted for this project, it can be concluded that those persons who reside in and around the PFO would bear some adverse effects due to the continued management of the PFO. However, based on the data and criteria identified above, no environmental justice populations are present in the study area. It is possible that some highly localized minority or low-income populations exist, but it is unlikely that any such populations would be disproportionately affected compared to the general population under any of the alternatives being considered in the EIS. Additionally, persons of all races and income levels were invited to participate in the public participation process for the EIS, and comments or input into the process from any minority or low-income persons were considered equally with all other persons. Therefore, implementation of any of the alternatives would be in compliance with EO 12898.

### **Summary**

Continued management actions within the PFO are expected to support jobs and income in the local economy. On average, employment generated from activities within the PFO is expected to support a notable number of jobs in the study area. These jobs and income levels are more important to the portions of study area that are more closely tied to activities within the PFO.

Continued management actions are not expected to have significant impacts on population trends or government services. Under this alternative, existing conditions and social trends would generally remain the same while environmental justice impacts are not expected.

#### **4.15.2 Alternative A**

##### **Impacts to Regional Employment**

Under Alternative A, activities within the PFO are expected to have impacts on employment that are similar to the No Action Alternative. However, some differences in employment are expected. Coal mining and grazing are expected to continue at levels similar to the No Action Alternative, thus no changes in employment are expected. However, oil and gas development is expected to increase with an additional eighteen wells drilled per year. As a result employment in the study area is expected to increase slightly over the No Action Alternative due to the increased oil and gas activity.

##### **Recreation**

Under Alternative A, increasing recreation demands and impacts would be managed with numerous prescriptions intended to meet that demand, enhance recreation opportunities and experiences, and provide opportunities for private enterprise to assist in recreation management. Concessionaires would manage the collection of fees for use of the zones in accordance with objectives identified under this Alternative. Development and use of the five High Use Zones would lead to increased levels of recreation use concentrated in the high use zones where higher levels of resource impacts would occur. Development of facilities within the High Use Zones will occur as described under this Alternative during the life of the plan.

The combination of concessions, outfitters and development of facilities would increase employment and income for the local residents while meeting existing and future demands for recreational facilities and experiences if local residents are employed. Designation of the Range Creek Jeep trail for OHV use would also provide additional recreational opportunities compared to the No Action Alternative. However OHV recreation would be more limited than under the No Action Alternative. The large open areas identified in the No Action Alternative would not remain open for OHV use. Areas open to locatable mineral development and or mineral materials such as Ferron and Helper Field, Book Cliffs, Nine Mile Canyon would also limit recreation. The mineral exploration may also negatively impact the river recreation near the Price Canyon area. Thus, continuing visitor trends in recreation can improve the local area economy by increasing employment if residents fill the new service industry positions, but OHV and associated activities would be more limited than under the No Action Alternative. The loss in OHV expenditures from limited open land use may offset the income gains from the new Range Creek Jeep trail and facility developments.

##### **Impacts to Regional Income**

Slight increases in regional income are expected under Alternative A relative to the No Action Alternative. This is due to an increase in oil and gas development and recreational activities. However, these increases are not expected to be significant.

## **Impacts to Population**

Significant changes in population are not expected to occur under Alternative A, though some increases may occur. Some minor localized impacts are possible within portions of the study area that are more closely tied to the employment opportunities generated by management actions within the PFO (oil and gas development).

## **Impacts to Community Services**

As discussed above, management actions are not expected to cause significant changes in population in the study area. Therefore, it is not expected that significant impacts to community services would occur under this Alternative.

## **Social Impacts**

Same as No Action Alternative.

## **Environmental Justice**

Same as No Action Alternative.

## **Summary**

Management actions under Alternative A are expected to support jobs and income in the local economy. On average, employment and income generated from activities within the PFO are expected to increase slightly relative to the No Action Alternative. These jobs and income will be more important to the portions of study area that are more closely tied to activities within the PFO. Management actions under Alternative A are not expected to have significant impacts on population trends or government services. Under this alternative, existing conditions and social trends would generally remain the same while environmental justice impacts are not expected.

### **4.15.3 Alternative B**

#### **Impacts to Regional Employment**

Under Alternative B, management actions within the PFO may cause a slight decrease in regional employment. A decline in future potential employment is expected under this alternative due to restrictions in oil and gas development. However, some increases in employment would occur with expansion of recreational activities. Employment associated with coal mining and grazing operations is expected to be the same as the No Action Alternative. Changes in overall employment are not expected exceed 30 jobs so the impacts are not considered significant. However, there may be some localized impacts in communities that depend more heavily on PFO activities for employment opportunities.

#### **Impacts to Regional Income**

Future potential income expected to be generated under Alternative B is likely to decline in the study area relative to the No Action Alternative due to a reduction in oil and gas development. However, an increase in recreational visitor days is expected to increase income to businesses that support these activities under this alternative. Income associated with coal mining and grazing is expected to be the same as the No Action Alternative.

**Recreation**

Alternative B is similar to Alternative A except that the BLM will manage the collection of fees for use of the five high use zones in accordance with objectives identified under this Alternative. Here private enterprises would not assist in recreational management, decreasing employment and income for local residents compared to Alternative A, but direct spending from recreational visitors and the recreational experience would remain similar. Also, management of other resources would limit some types of recreation use by imposing restrictions on development of facilities. OHV and associated activities would be more limited than under the No Action Alternative. The loss in OHV expenditures from limited open land use may offset the income gains from the new Range Creek Jeep trail and facility developments.

**Impacts to Population**

The decline in employment resulting from this alternative is not expected to have significant impacts to population in the two county study area.

**Impacts to Community Services**

Management actions under Alternative B are not expected to cause significant changes in population trends in the study area. Therefore, it is not expected that significant impacts to community services would occur under this Alternative.

**Social Impacts**

Under this Alternative, existing social conditions and trends would generally remain the same.

**Environmental Justice**

Same as No Action Alternative.

**Summary**

Restrictions in oil and gas development are expected to have some negative impacts on future potential increases in employment and earnings in the study area. However, positive impacts could occur to certain lifestyles with increased protection of wildlife resources. Changes in management under this alternative are not expected to have significant impacts on population trends or community services and environmental justice impacts are not expected.

**4.15.4 Alternative C****Impacts to Regional Employment**

Management actions within the PFO under the Alternative C are expected to cause a decrease in regional employment relative to the No Action Alternative. Restrictions on oil and gas development in the PFO could lead to a reduction in employment in the area by as much as 70 part-time and full-time jobs per year. While this reduction in employment is not considered significant in the study area, some localized impacts are possible in areas that are more closely tied to oil and gas development. Employment tied to coal mining and grazing is not expected to vary significantly from the No Action Alternative.

## **Impacts to Regional Income**

Regional income under Alternative C is expected to decline by as much as \$3.5 million per year under Alternative C due to restrictions in oil and gas development. Regional income associated with coal mining and grazing is not expected to change from the No Action Alternative.

### **Recreation**

Under Alternative C, limits would be imposed on recreation uses in the PFO in order to address levels of demand that are in excess of capacity and leading to resource impacts. All recreation use and access in the San Rafael Swell would be managed through a permit and reservation system. This would limit recreation use and visitor spending to the area. However, if funds from the permits recirculate in the local area economy some of the decrease in spending from limiting use would be offset. The emphasis on natural processes would result in limitations on the installation of facilities, access to recreation sites, and areas open to various types of recreation use. Employment and income opportunities directly associated with recreation from Alternative A or to a lesser extent Alternative B would not be obtainable under this alternative. In addition, the Price Canyon Recreation site and the Cedar Mountain Recreation site would be closed, diminishing developed recreation opportunities and causing a decrease in recreational expenditures. Management of other resources would generally support dispersed and primitive forms of recreation activities, but could limit some forms of motorized and developed recreation activity. None of the open areas identified in the No Action Alternative would remain open to cross country OHV use, again limiting recreational demand, which could lead to a decline in spending in the local economy. Also, wildlife management prescriptions would place extended seasonal limits on recreation access.

Impacts to natural resources important to recreation opportunities would be minimized, but demand for recreation would not be met. The quality of primitive recreation would be improved. However, current trends suggest the majority of recreational use will be with motorized and developed forms of recreation. So the management plan under this alternative would not be meeting the recreational demand. The quality of recreation for these activities would decline. The increase in recreation demand would be unlikely to be met, minimizing income and employment gains for the area. Thus, the quality of recreation for the majority of visitors and the potential employment and income gains under Alternative C would be the smallest from all the alternatives.

### **Impacts to Population**

Changes in regional employment, while not expected to be significant throughout the study area, may result in localized impacts in communities more tied to activities associated with the PFO. Communities such as Price, which are located near BLM lands and activities which take place on these lands, may realize more of the potential employment declines than other communities. For impacted communities, this may lead to a decline in population if similar employment opportunities are not available.

## Impacts to Community Services

As discussed above, notable changes in population are not expected under this alternative, though localized impacts are possible. Therefore, identifiable changes in demand or supply for government services may occur as a result of this alternative in some areas.

## Social Impacts

While this management alternative supports different priorities, and the differences may be identifiable on a localized basis, the social structure and lifestyle conditions and trends within the PFO would *generally* remain the same as current conditions.

## Environmental Justice

Same as No Action Alternative.

## Summary

Socioeconomic implications under Alternative C are expected to vary from the No Action Alternative. Activities within the PFO are expected to continue to support jobs and income in the local economy, though not at the levels expected under the No Action Alternative. Restrictions in oil and gas development and recreation would likely lead to some declines in employment and income in the study area. Management actions are not expected to have significant impacts on population trends or government services, though local impacts are possible. Under this alternative, existing conditions and social trends would generally remain the same while environmental justice impacts are not expected.

### 4.15.4 Alternative D

## Impacts to Regional Employment

Management actions within the PFO under the Alternative D are expected to cause a slight decrease in regional employment relative to the No Action Alternative. Slight changes in employment are expected due to restrictions in oil and gas development. However, some increases in employment would occur with expansion of recreational activities. Employment tied to coal mining and grazing is not expected to vary significantly from the No Action Alternative.

## Impacts to Regional Income

Regional income under Alternative D is expected to decline slightly in the study area relative to the No Action Alternative due to restrictions in oil and gas development. Regional income is expected to increase slightly with an increase in recreational use in the PFO. However, regional income is not expected to change from the No Action Alternative due to changes in coal mining or grazing.

## Recreation

Development and use of the five High Use Zones under Alternative D would be similar to Alternative B. BLM would manage the collection of fees for use of the zones in accordance with objectives identified under this Alternative. Thus, the socioeconomic impacts of

recreation from Alternative D would be similar to the socioeconomic impacts under Alternative B.

### **Impacts to Population**

Changes in regional employment are not expected to have significant impacts on population trends within the study area under this alternative.

### **Impacts to Community Services**

As discussed above, notable changes in population are not expected under this alternative. Therefore, identifiable changes in demand or supply for government services are not expected as a result of this alternative.

### **Social Impacts**

While this management alternative supports different priorities, and the differences may be identifiable on a localized basis, the social structure and lifestyle conditions and trends within the PFO would *generally* remain the same as current conditions.

### **Environmental Justice**

Same as No Action Alternative.

### **Summary**

Socioeconomic impacts under the Alternative D are expected to be very similar to the No Action Alternative. Activities within the PFO are expected to support jobs and income in the local economy, though slight decreases in regional income and employment are possible under this alternative due to restrictions in oil and gas development. Management actions are not expected to have significant impacts on population trends or government services. Under this alternative, existing conditions and social trends would generally remain the same while environmental justice impacts are not expected.